

REMARKS

The Amendments

Claim 1 is amended so that the second layer, (ii), is no longer optional. Claim 5 is amended so that it depends upon claim 1. The other claim amendments relate to formal matters and do not narrow the scope of the claims. Support for the new dependent claims is found throughout the original disclosure; see, e.g., the original claims; page 2, lines 25-29; page 4, lines 7-11; page 5, lines 1-24

To the extent that the amendments avoid the prior art or for other reasons related to patentability, competitors are warned that the amendments are not intended to and do not limit the scope of equivalents which may be asserted on subject matter outside the literal scope of any patented claims but not anticipated or rendered obvious by the prior art or otherwise unpatentable to applicants. Applicants reserve the right to file one or more continuing and/or divisional applications directed to any subject matter disclosed in the application which has been canceled by any of the above amendments.

The Restriction Requirement

Applicants maintain their traversal of the restriction requirement. Particularly, it is urged that the process of preparation claims be considered for rejoinder with the product claims, should the product claims be allowed. The process claims have been amended so that they depend upon the main product claim 1. Thus, the process claims require the particulars of the independent product claim. In this situation, upon a finding of allowability of the product claims, the claims to a process of preparing such product should be rejoined and allowed with the product claims.

The Rejection Under 35 U.S.C. § 101

The rejection of claims 9 and 10 under 35 U.S.C. § 101 is believed to be rendered moot by the amendment of those claims so they no longer are merely “use” claims.

The Rejection Under 35 U.S.C. § 112; Second Paragraph

The rejection of claim 3 under 35 U.S.C. § 112, second paragraph, is rendered moot by the amendment thereto.

The Obviousness-Type Double Patenting Rejection

The obviousness-type double patenting rejection is overcome by the Terminal Disclaimer, as to U.S. Patent No. 6,280,520, submitted herewith.

The Rejections Under 35 U.S.C. § 102, Alternatively § 103

The rejections of the claims under 35 U.S.C. § 102, as anticipated, or alternatively under 35 U.S.C. § 103, as being obvious, over each of DE 19802234, Schmid (U.S. Patent No. 5,607,504 or EP 753,545), Ash (U.S. Patent No. 4,434,010) or Schmid (U.S. Patent No. 5,985,125) are respectfully traversed.

DE 19802234

As stated in the Office Action, the pigments of DE ‘234 have a substrate, a first layer of carboxy-containing ZrO₂ with a refractive index of 1.7 to 1.8 and a second layer of a semitransparent metal. DE ‘234, however, does not disclose a pigment which additionally contains a layer of material with a refractive index of more than 1.8. Instant claim 1 has been amended so that such layer is no longer optional. This amendment, at least, distinguishes the pigments disclosed or suggested in DE ‘234.

There is no suggestion from DE '234 to modify its pigments to provides such a "second layer" according to the instant claims. The objective of DE '234 is to provide goniochromatic luster pigments and the invention is characterized by use of the new carboxy-containing ZrO_2 materials. The reference is not directed to pigments having strong interference colors and does not motivate one of ordinary skill in the art toward a structure providing such. No other teachings of the reference would motivate one of ordinary skill in the art to modify the DE '234 pigments to provide the "second layer" of the instant claims.

Thus, the alternative rejection under 35 U.S.C. § 102 or § 103 should be withdrawn.

Schmid US '504, EP '545

Schmid EP '545 does not correspond to US '504.

Schmid EP '545 is discussed on page 1 of the instant specification and provides a disclosure similar to DE '234 discussed above and Schmid US '125 discussed below. In fact, it corresponds to the Schmid US '125. It discloses goniochromatic pigments having a substrate with a layer of low refractive index material and a reflective layer. There is no further layer of a material with refractive index of more than 1.8, such as applicants' "second layer." For the same reasons stated above in connection with DE '234, it would not have been obvious to modify the reference pigments to provide such a "second layer."

Schmid US '504 discloses metallic luster pigments which are based on platelet-like metallic substrates. The pigments contain a metallic substrate, a layer of low refractive index material and a layer of high refractive index material.

The reference fails to disclose or suggest pigments with a platelet-shaped substrate having a refractive index of more than 1.8. The substrates for the Schmid US '504 pigments are discussed at col. 3, lines 54-59. Such substrates are opaque reflective materials. They do not provide a refraction effect which results in interference or a pearl luster effect. The

metallic substrate pigments of Schmid '504 provide a completely different result and objective from the claimed pigments with a substrate of material having a refractive index of more than 1.8. Further, it would not have been obvious to one of ordinary skill in the art to modify the pigments of Schmid '504 to replace the substrate with a substrate according to the instant claims because such would be contrary to the objectives of Schmid '504 to provide a metallic luster pigment rather than a pearl luster pigment.

Schmid '504 also fails to disclose a pigment having a semitransparent metal layer according to item (iii) of instant claim 1. The optional outer layer (C) in Schmid '504 is a metal oxide layer, not a metal layer. There is no suggestion from Schmid '504 to modify the outer layer to a semitransparent metal layer. Thus, Schmid '504 is additionally distinguished on this basis.

For the above reasons, the alternative rejection under 35 U.S.C. § 102 or § 103 should be withdrawn.

Ash

Ash is directed to a complex method for forming thin film flakes by using a flexible web material which receives a coating and then which is dissolved away. Ash discusses pigment materials based on platelet-shaped pigments in its background section at col. 1, lines 44-52, as a distinct material which is disadvantageous compared to the materials of its invention. Thus, Ash clearly distinguishes its materials from platelet-shaped substrate based materials, such as those of the instant claims. Ash generally discusses a number of possible optical layer combinations to be prepared with its flexible web process, however, none of the materials discussed include a platelet-shaped substrate of a material with refractive index more than 1.8, a first layer of low refractive index material, a second layer of high refractive index material and a semitransparent metal layer. The Office Action points to the disclosure

at col. 6, lines 41+, discussing dielectric stacks having alternating layers of high and low refractive index materials and to the disclosure of using semitransparent metallic layers at col. 2, line 30. But Ash provides no suggestion to use these types of structure together and certainly not in a structure which would meet the claim recitations. The structures discussed beginning at col. 6, line 41, are shown in Figures 3A-3E. For example, Fig. 3A merely discloses a dielectric stack of alternating high and low refractive materials; it contains no platelet-shaped substrate or semitransparent metal layer. Figs. 3B and 3D disclose materials with dielectric stacks and a metal reflecting layer. These structures also contain no platelet-shaped substrate or semitransparent metal layer as in the instant claims. Figs. 3C and 3E disclose materials which have a semi-opaque metal layer, 160, but which also have a metal reflective layer, 163. The reflective metal layer in these materials acts like the metallic substrate, such as discussed above in connection with Schmid '504, and are distinct from applicants' invention for the reasons discussed. The structures of Ash are unrelated to that of the structure of the instant claims and are provided for a different objective. As Ash makes clear in its background discussion, it is not related to materials based on a platelet-shaped substrate and its specific structure do not show a material based on a platelet-shaped substrate.

Thus, the alternative rejection under 35 U.S.C. § 102 or § 103 should be withdrawn.

Schmid US '125

Schmid '125 provides a disclosure similar to DE '234 discussed above. Thus, it is directed to goniochromatic luster pigments which have a platelet-shaped substrate, a layer of material with refractive index of 1.8 or less and a reflective coating, particularly partially transparent metal. Like DE '234 there is no teaching of a layer of material with refractive index of more than 1.8, such as the "second layer" of the instant claims. The reference


speaks of the use of high refractive index materials only in connection with providing the substrate, not a second layer. The reference also speaks of using metal oxides as the reflective layer (B). However, if such are considered as applicants' second layer, such pigments would then not contain a semitransparent metal layer, in addition, according to the instant claims. The same reasons that DE '234 fails to suggest modification of its pigment to provide such a layer also apply here. Those reasons are incorporated herein by reference.

Thus, the alternative rejection under 35 U.S.C. § 102 or § 103 should be withdrawn.

It is submitted that the claims are in condition for allowance. However, the Examiner is kindly invited to contact the undersigned to discuss any unresolved matters.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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